



Fig.1

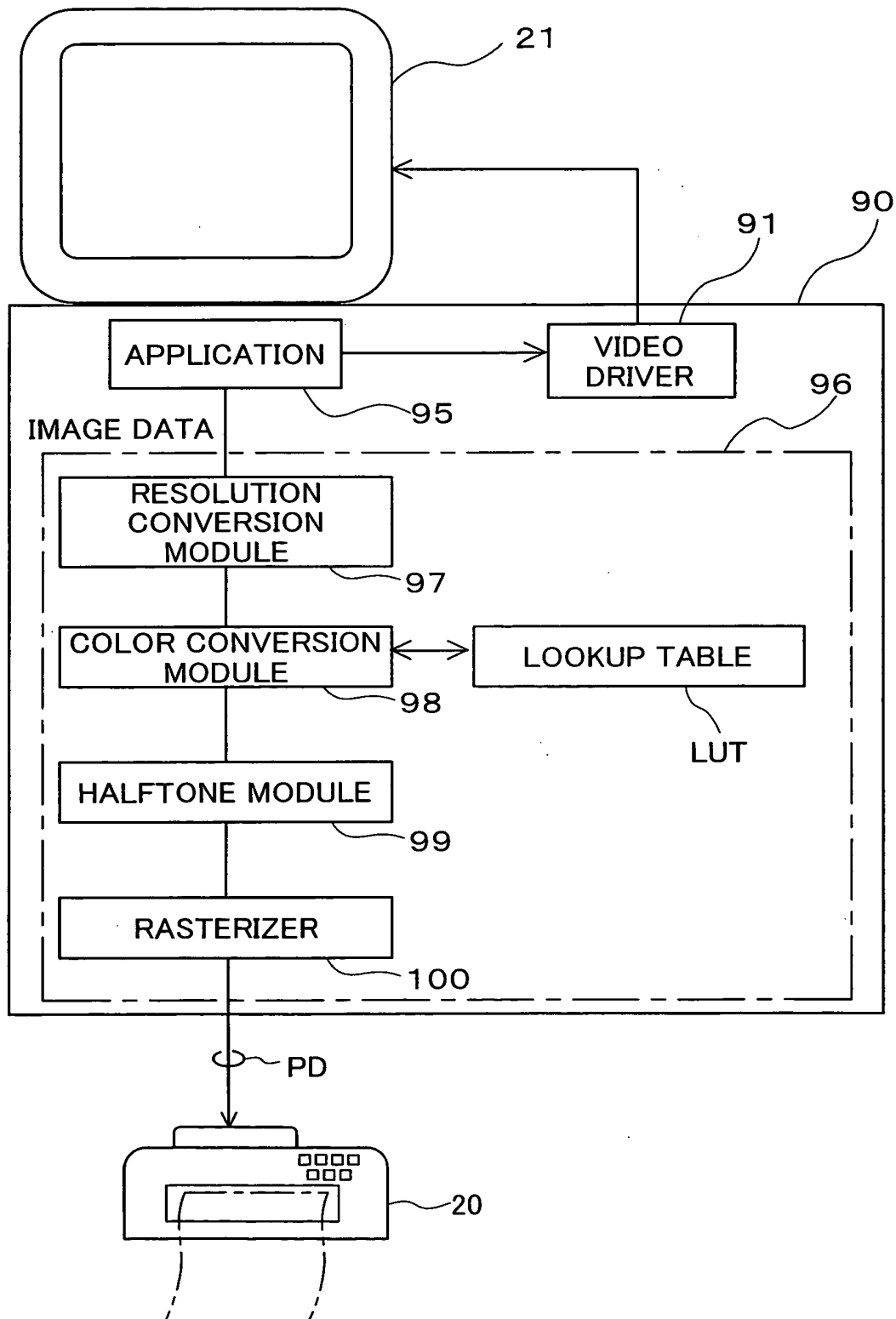


Fig.2

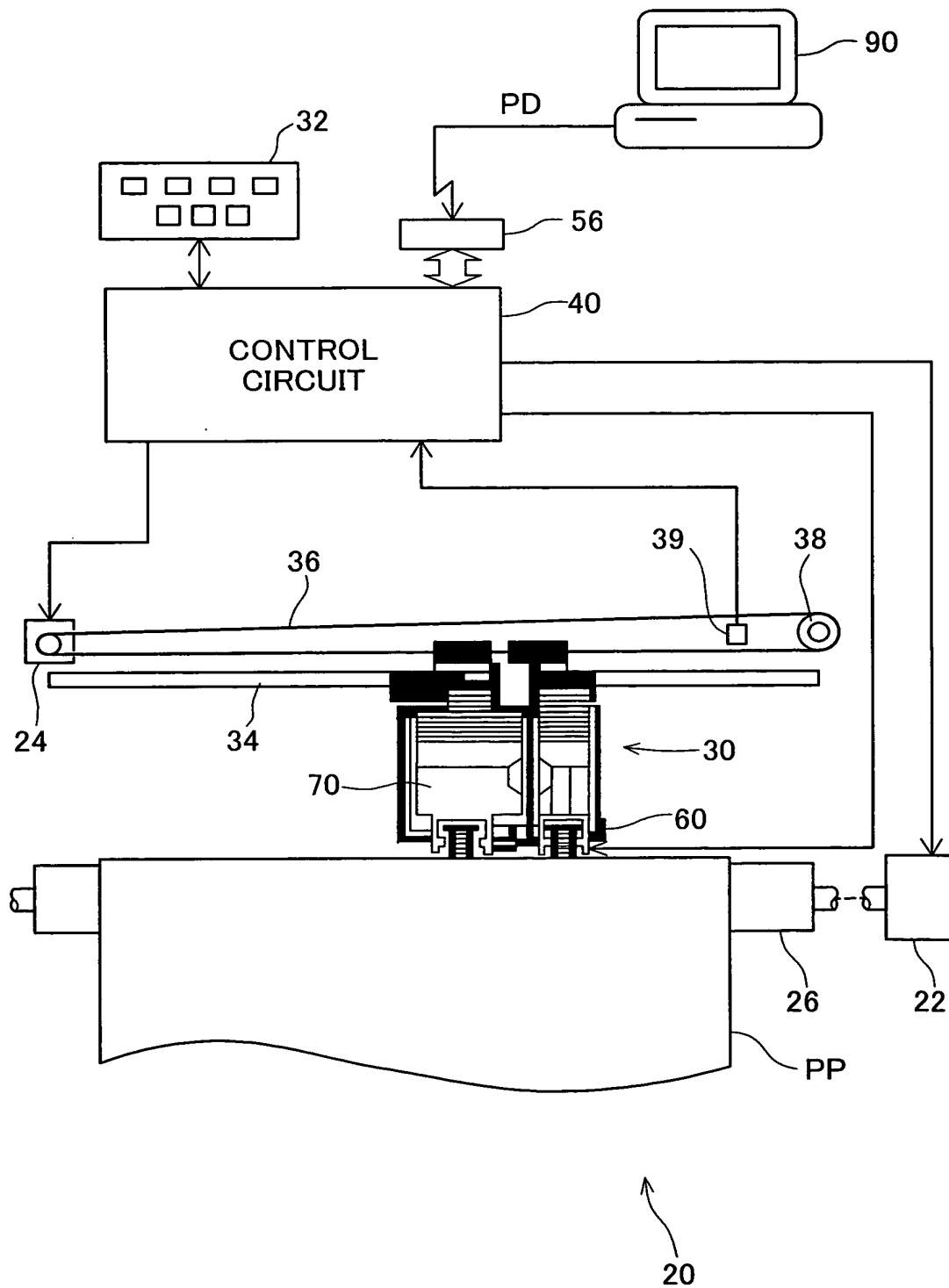


Fig.3

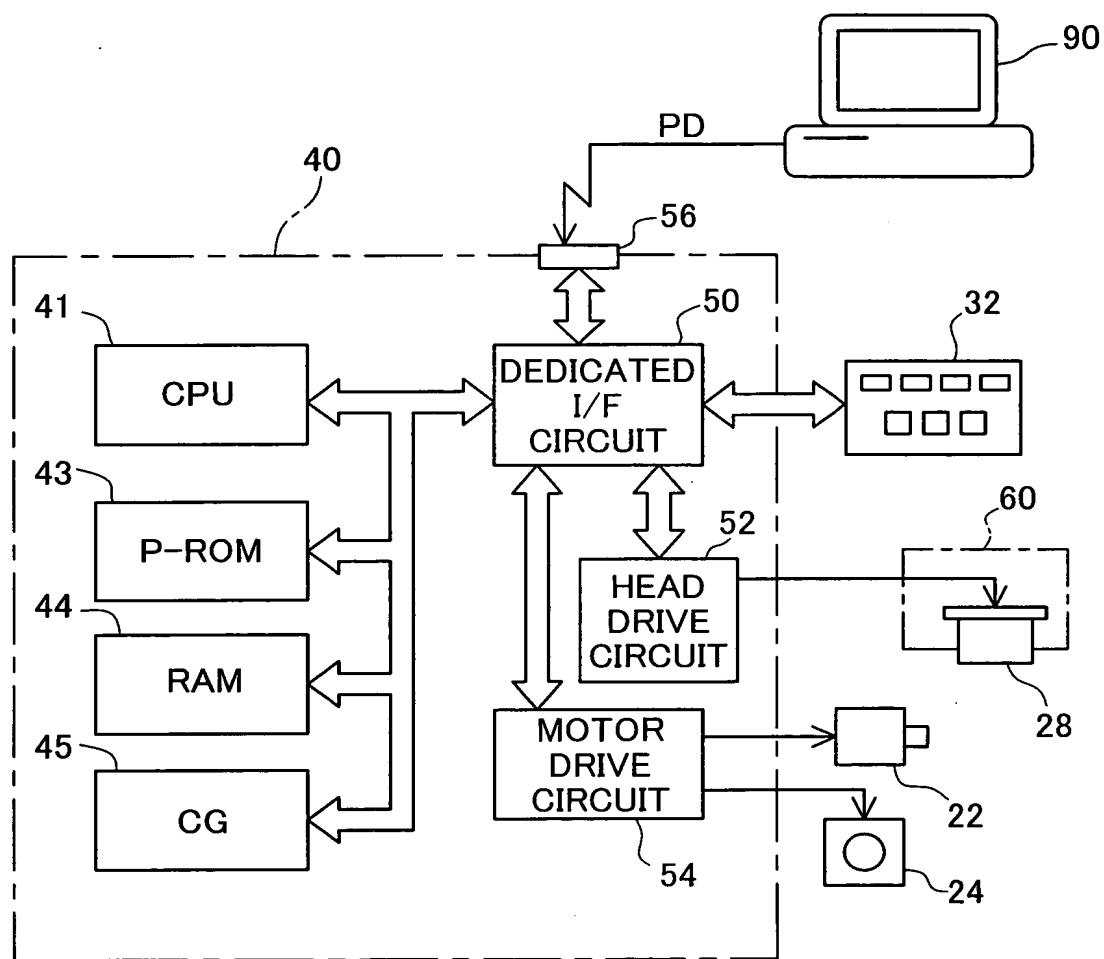


Fig.4

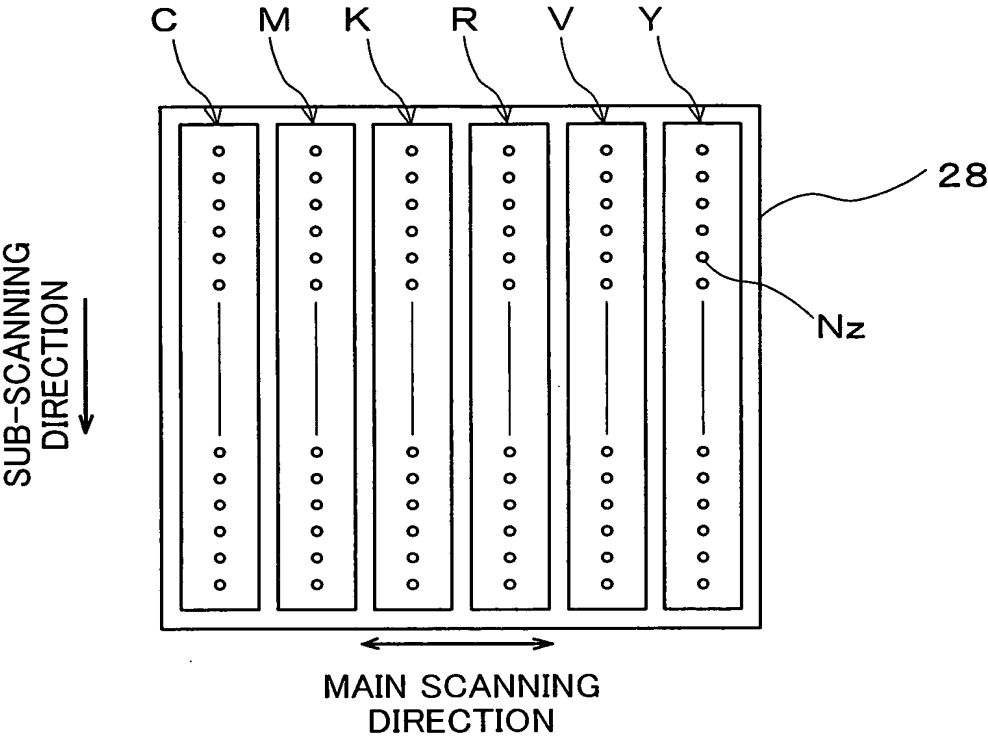


Fig.5(a)

| Ink | | Y | M | C | R | V | K |
|--------------------|-------------|-------|-------|--------|------|------|------|
| Colorant | Type (C.I.) | PY128 | PR122 | PB15:3 | PO43 | PV23 | PBk7 |
| | Density | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 |
| Dispersant | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Glycerin | | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 |
| Ethylene glycol | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 2-pyrrolidone | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 1,2-hexanediol | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| SURFYNOL E1010 | | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Ion exchange water | | q.v. | q.v. | q.v. | q.v. | q.v. | q.v. |

(wt%)

Dispersant: styrene/acrylic acid copolymer

PY: Pigment Yellow
 PR: Pigment Red
 PB: Pigment Blue
 PO: Pigment Orange
 PV: Pigment Violet
 PBk: Pigment Black

Fig.5(b)

| R | wCR | wMR | wYR | CMY Total |
|-----|-----|------|------|-----------|
| 1.0 | 0.0 | 0.71 | 2.86 | 3.57 |

Fig.5(c)

| V | wCV | wMV | wYV | CMY Total |
|-----|------|------|-----|-----------|
| 1.0 | 0.68 | 2.89 | 0.0 | 3.57 |

Fig.6

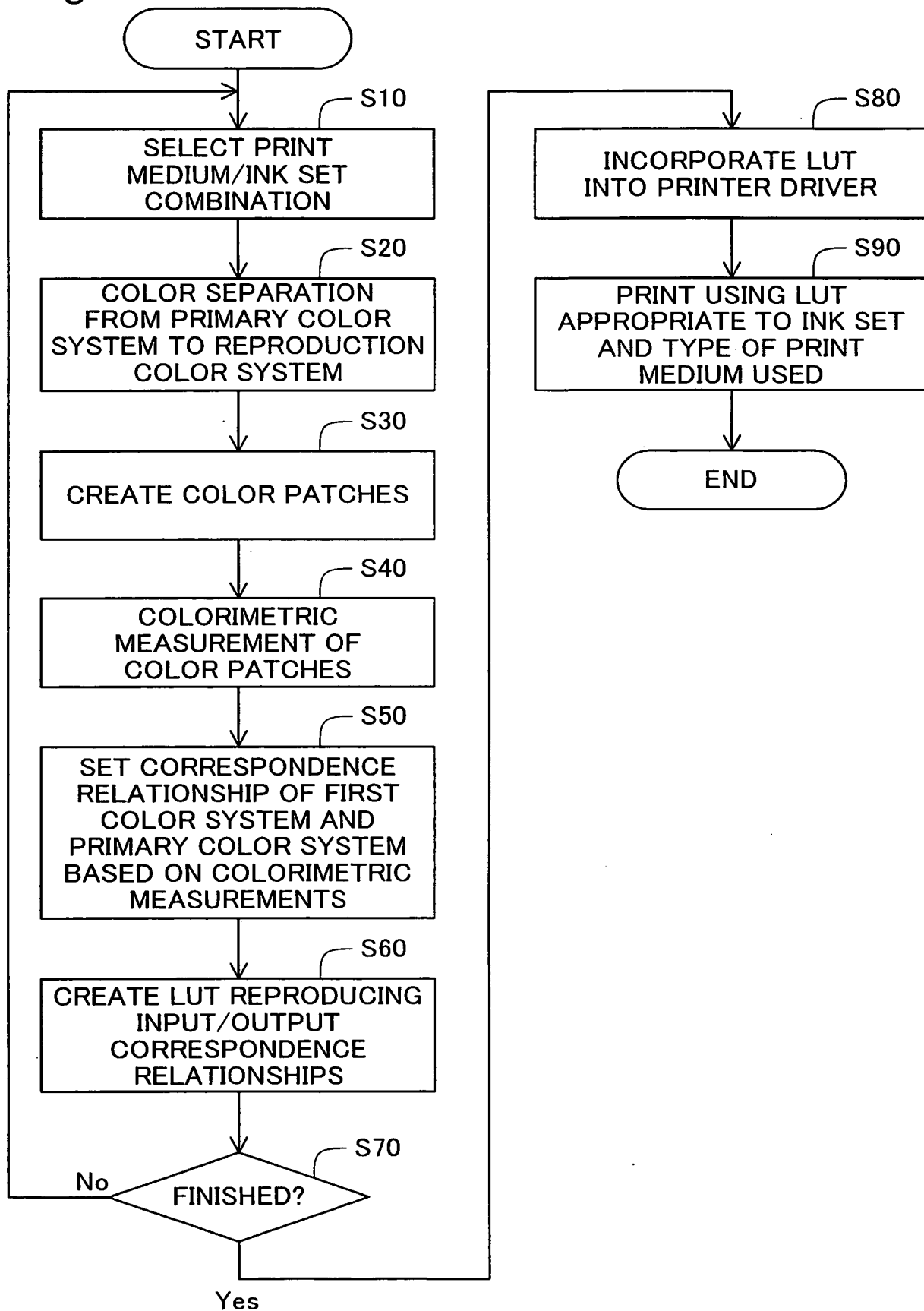


Fig.8

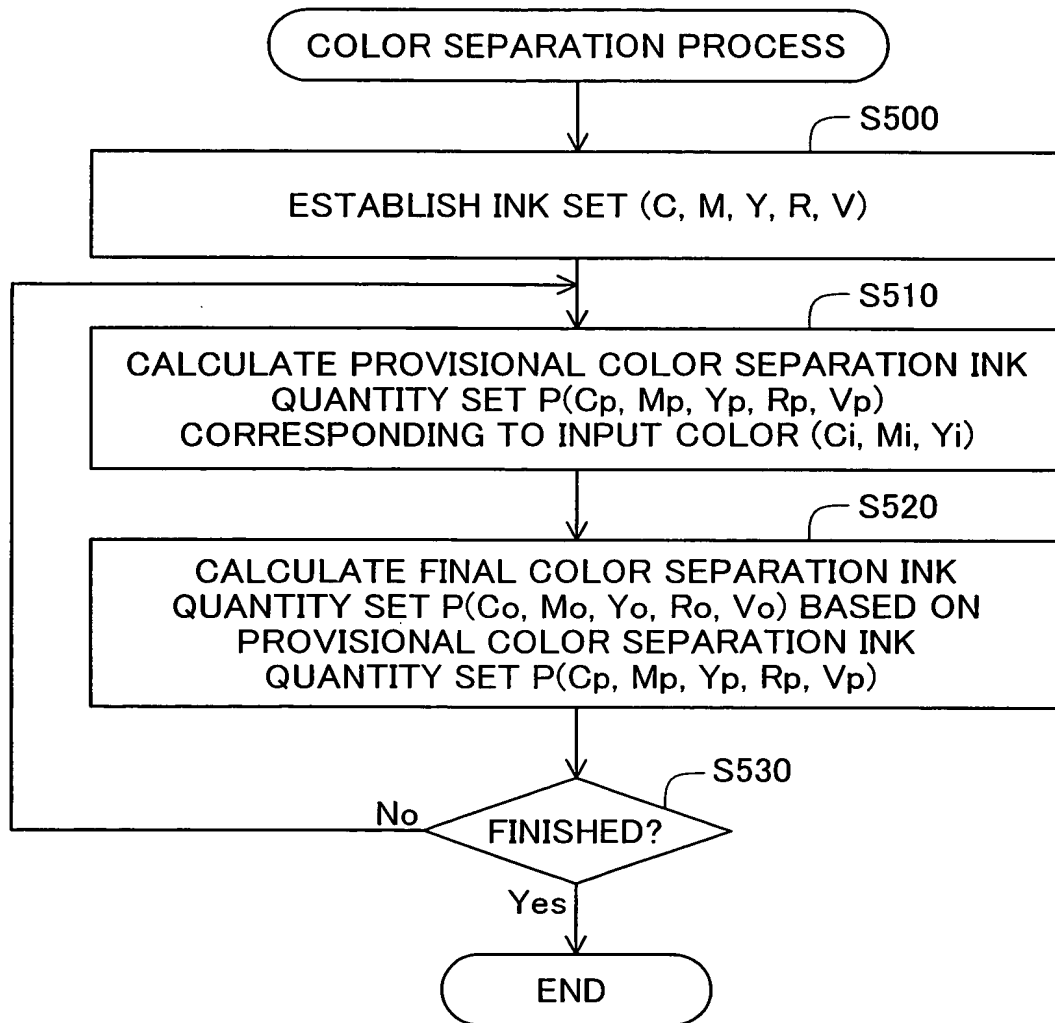


Fig.9

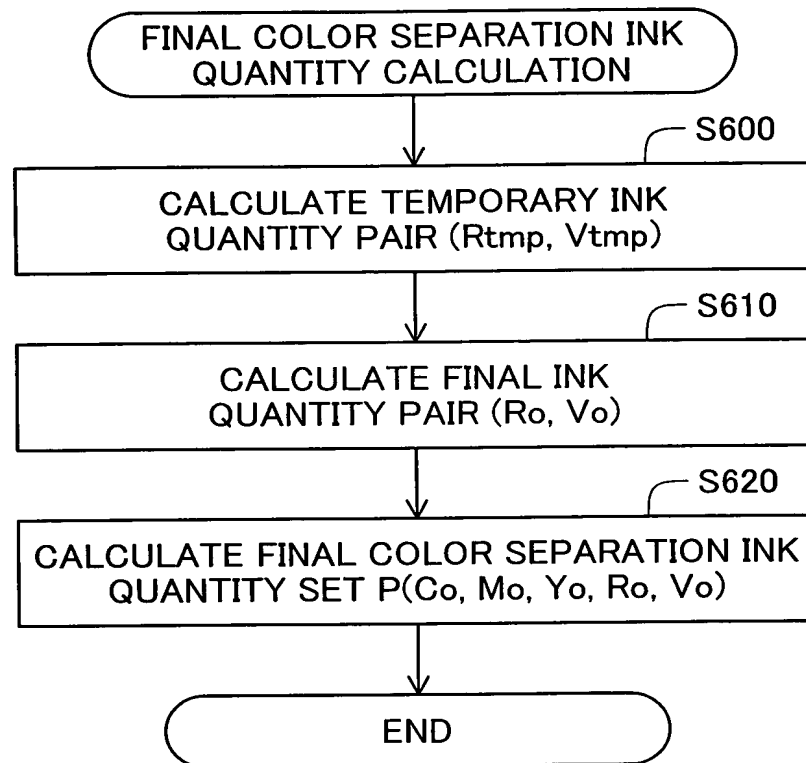


Fig.10(a)

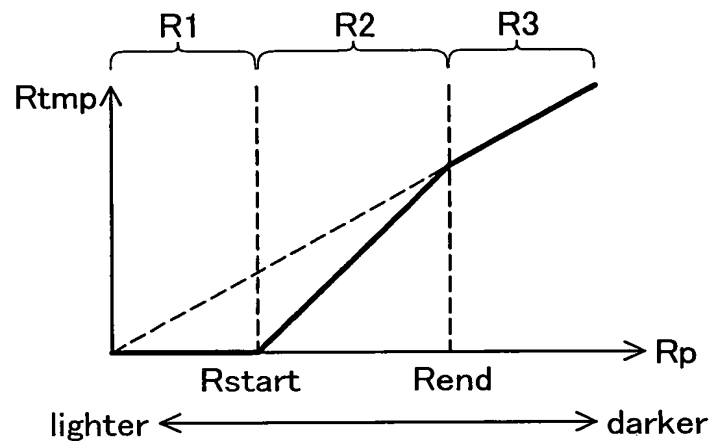


Fig.10(b)

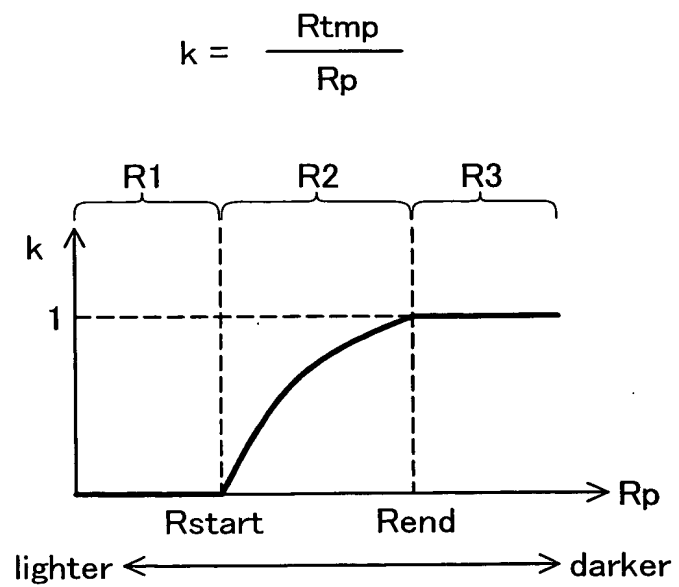


Fig.11(a)

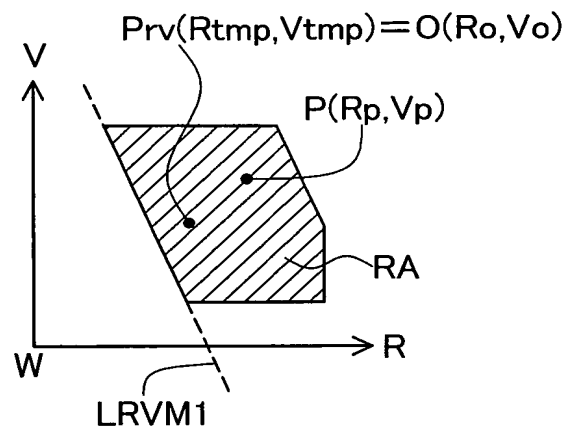


Fig.11(b)

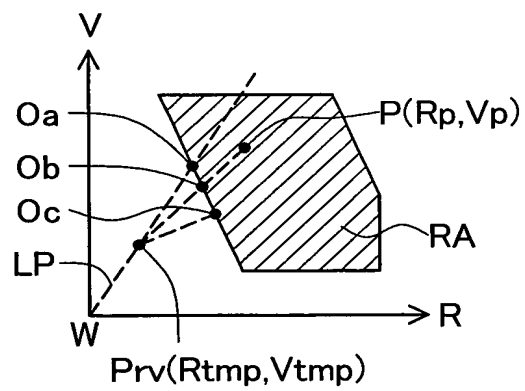


Fig.12

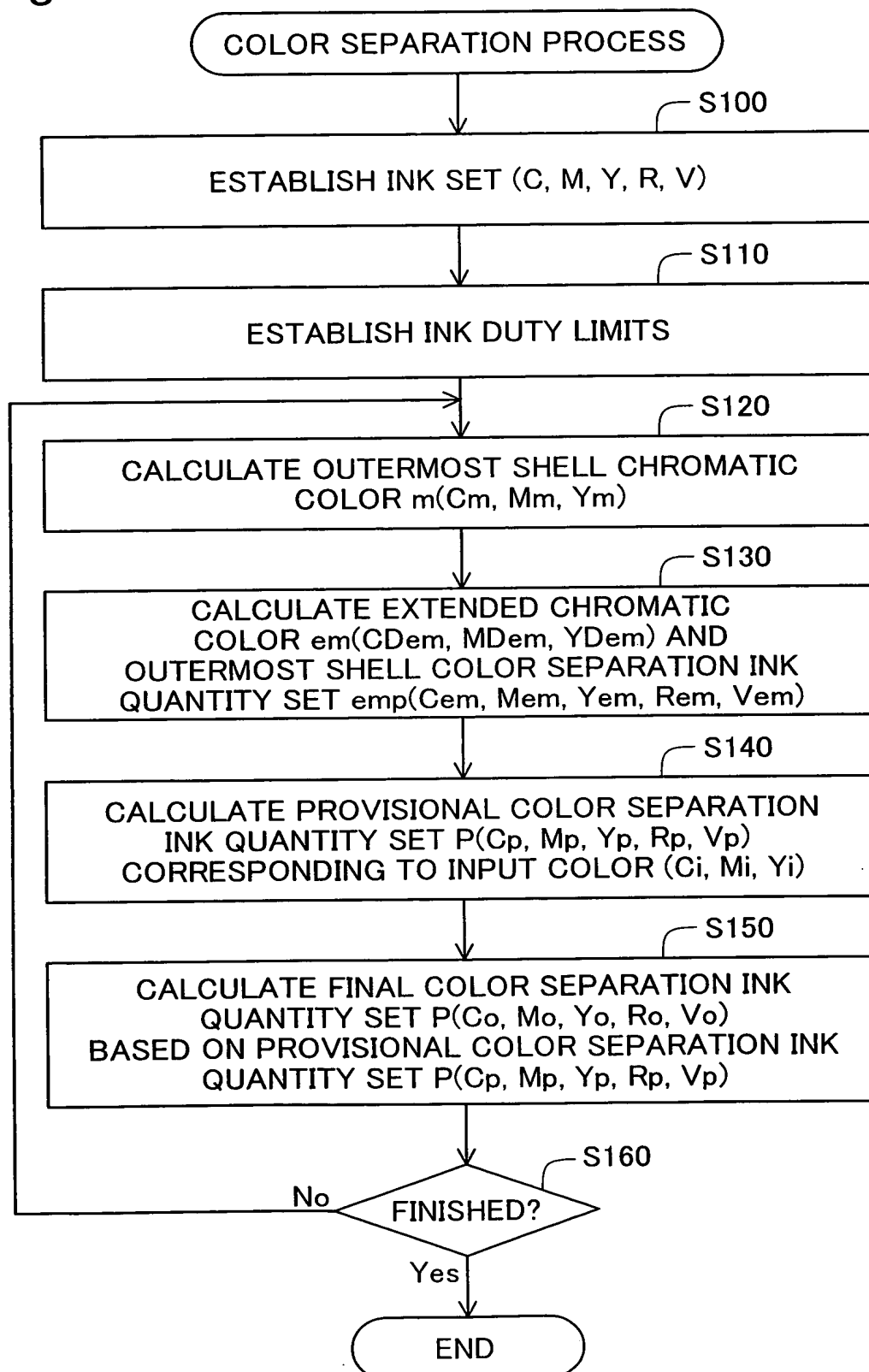


Fig.13(a)

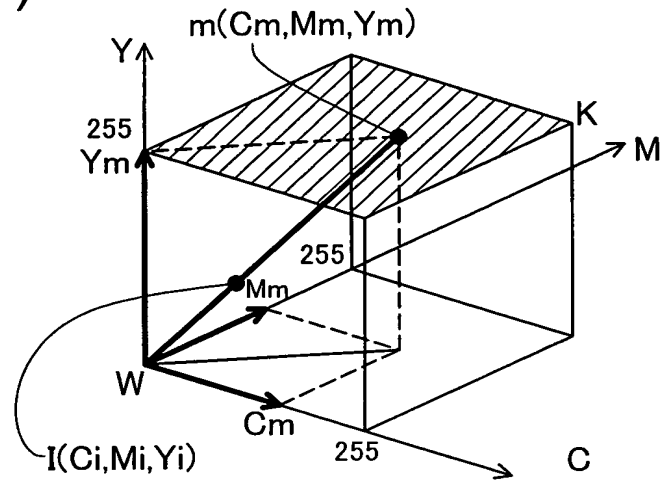


Fig.13(b)

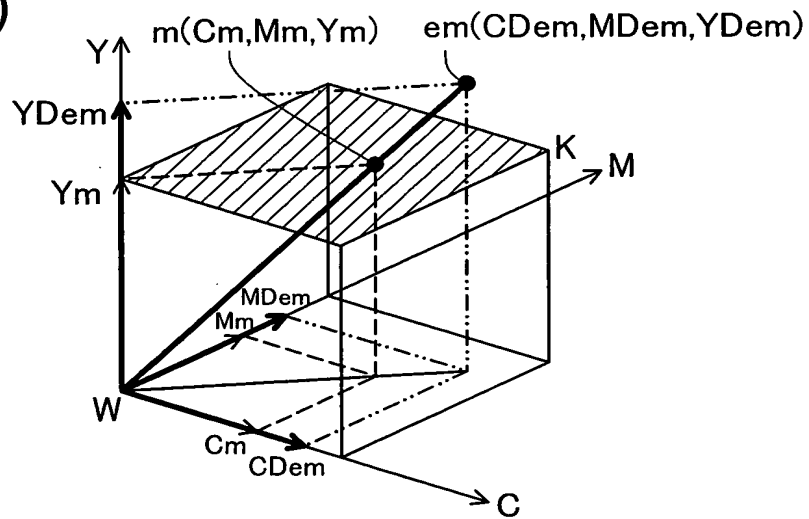


Fig.13(c)

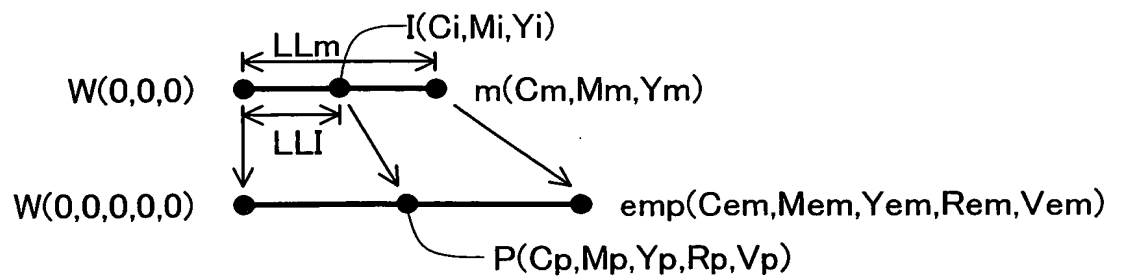


Fig.15

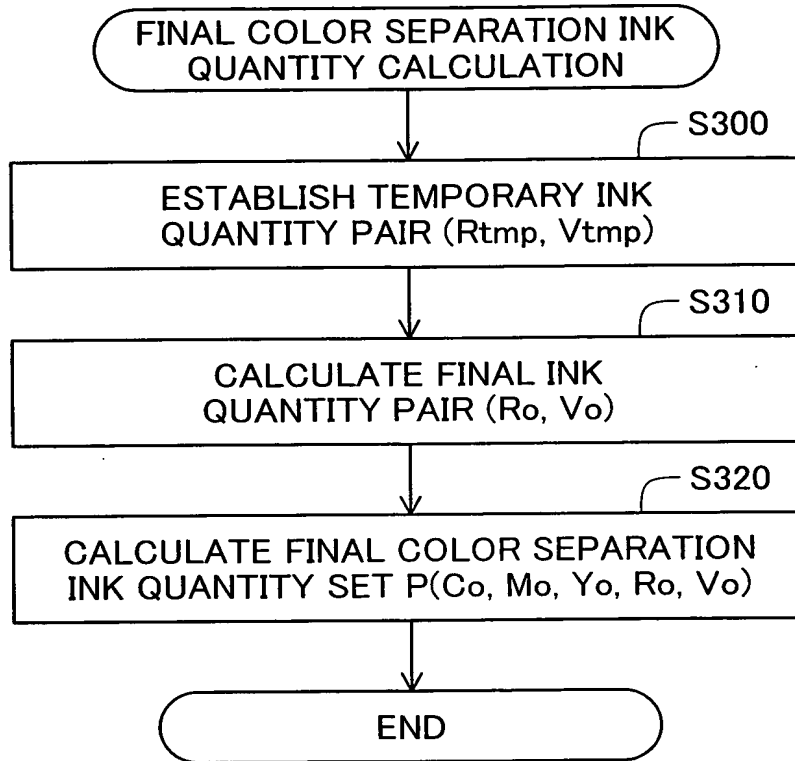


Fig.16(a)

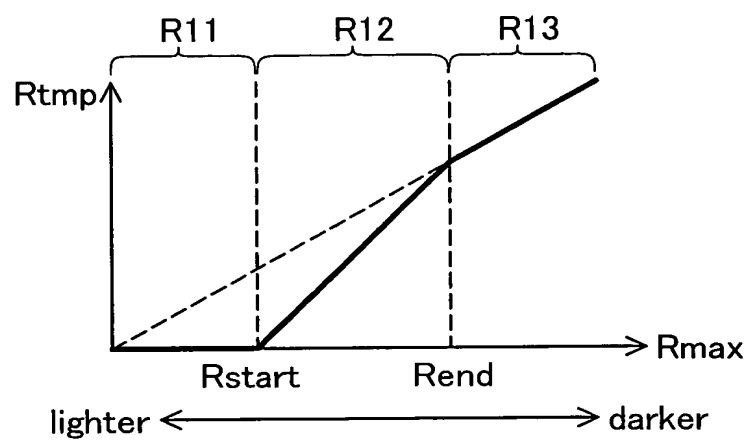


Fig.16(b)

$$k = \frac{R_{tmp}}{R_{max}}$$

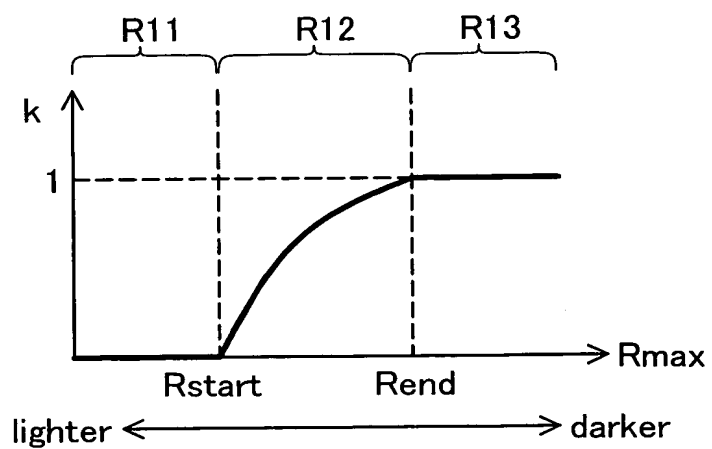


Fig.17(a)

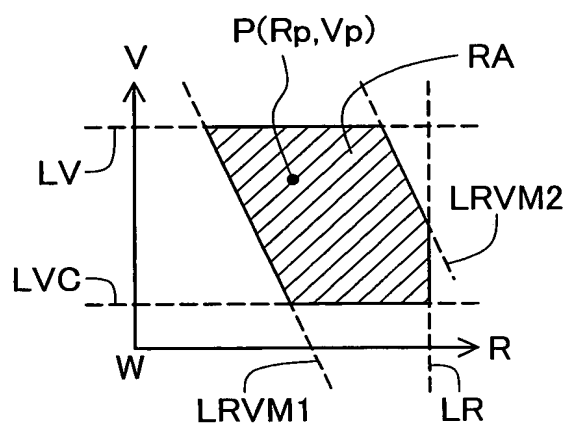


Fig.17(b)

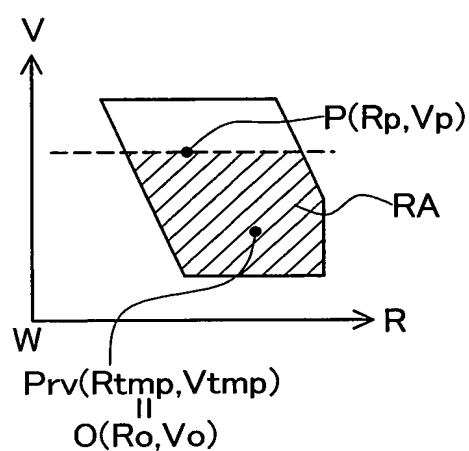


Fig.17(c)

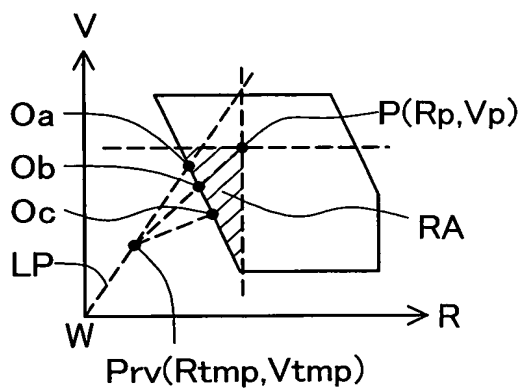


Fig.17(d)

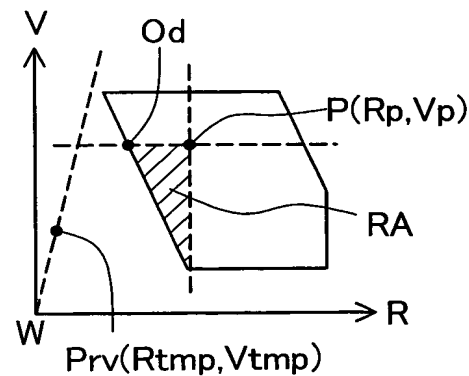


Fig.18

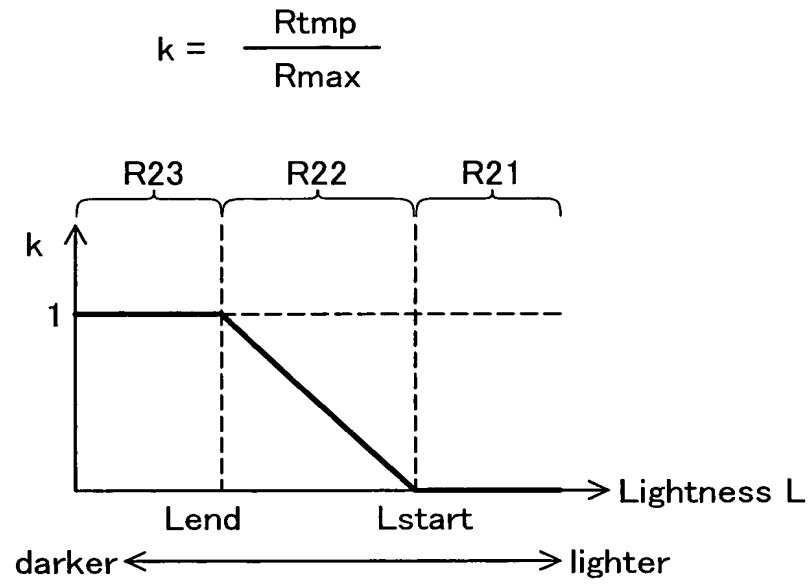


Fig.19

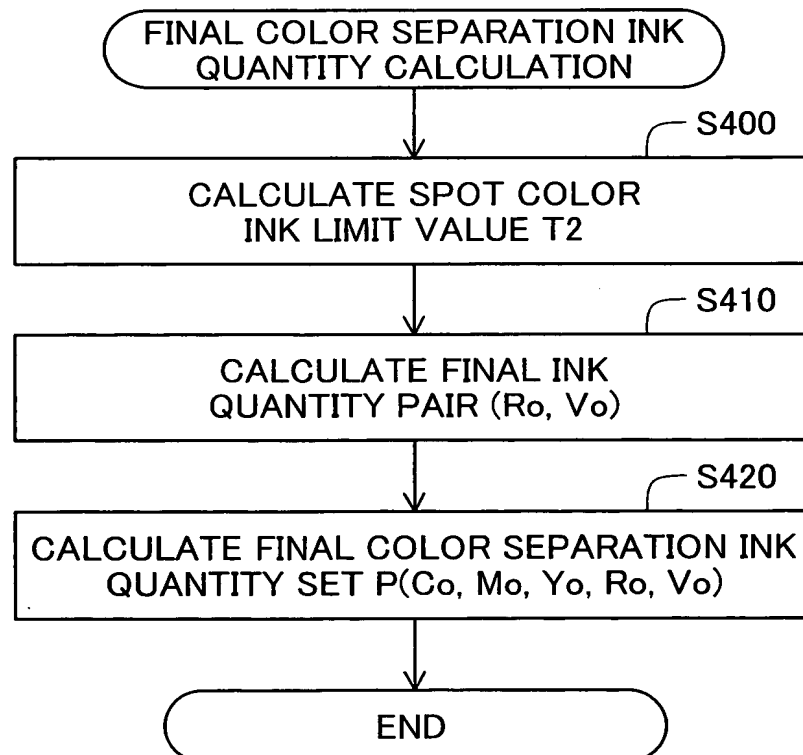


Fig.20

$$k2 = \frac{T2}{T2_{\max}}$$

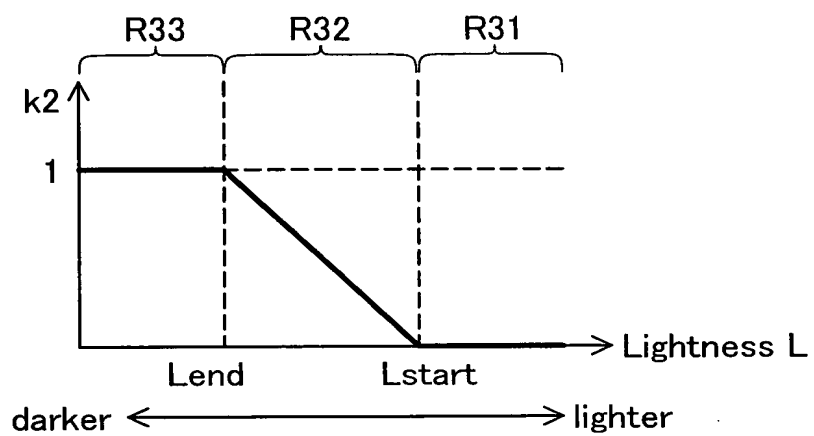


Fig.21(a)

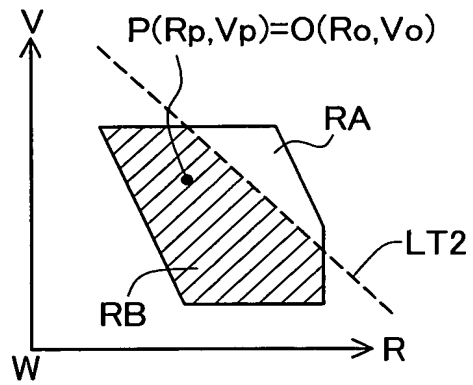


Fig.21(b)

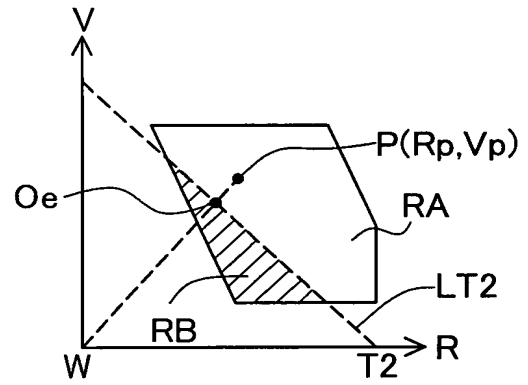


Fig.21(c)

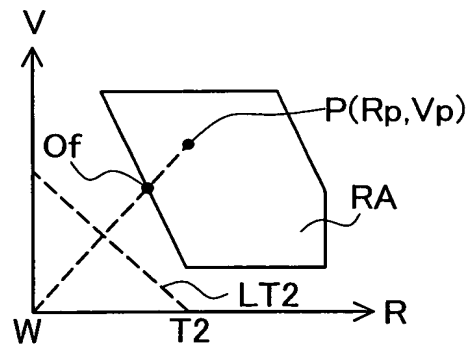


Fig.22

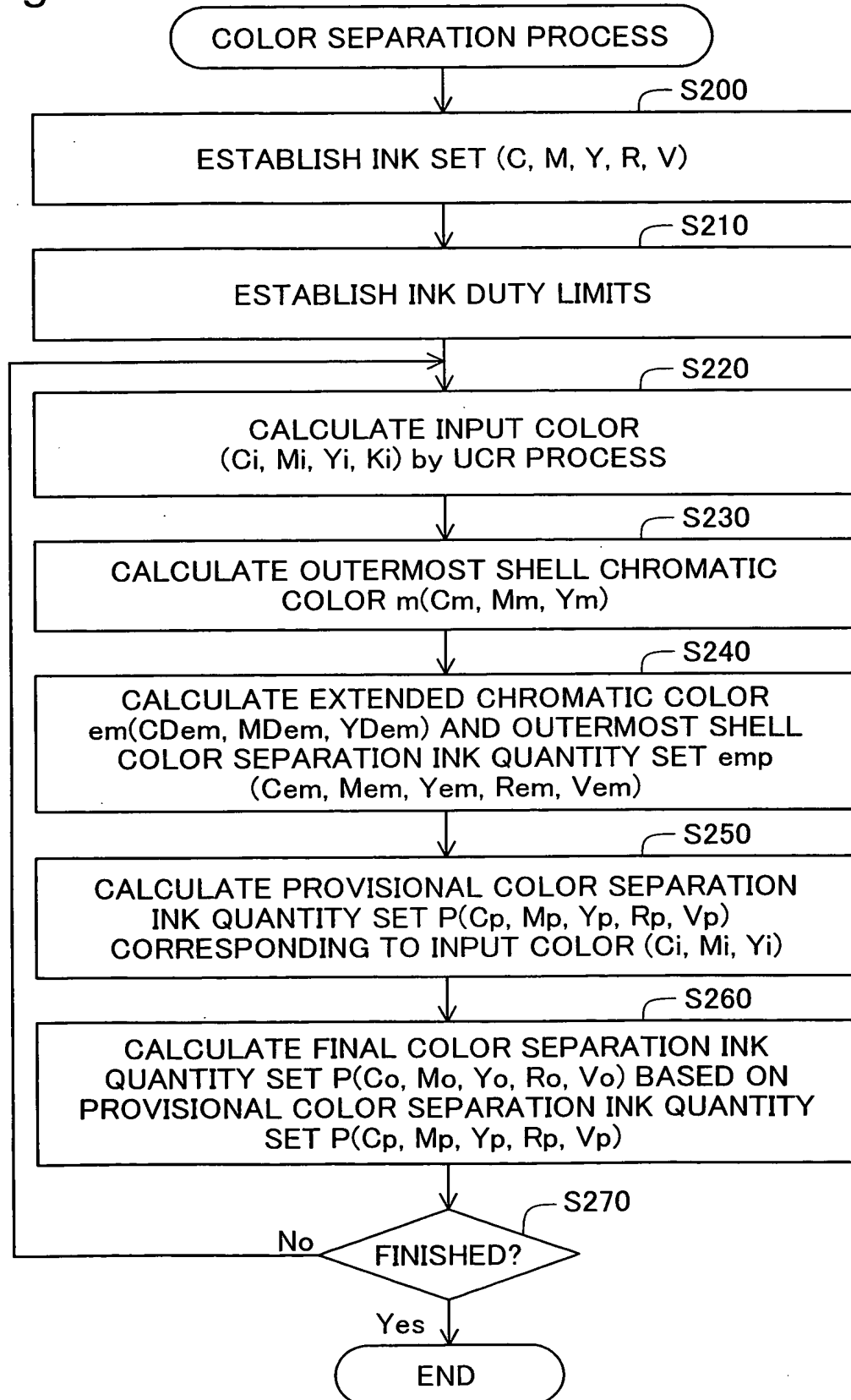


Fig.23

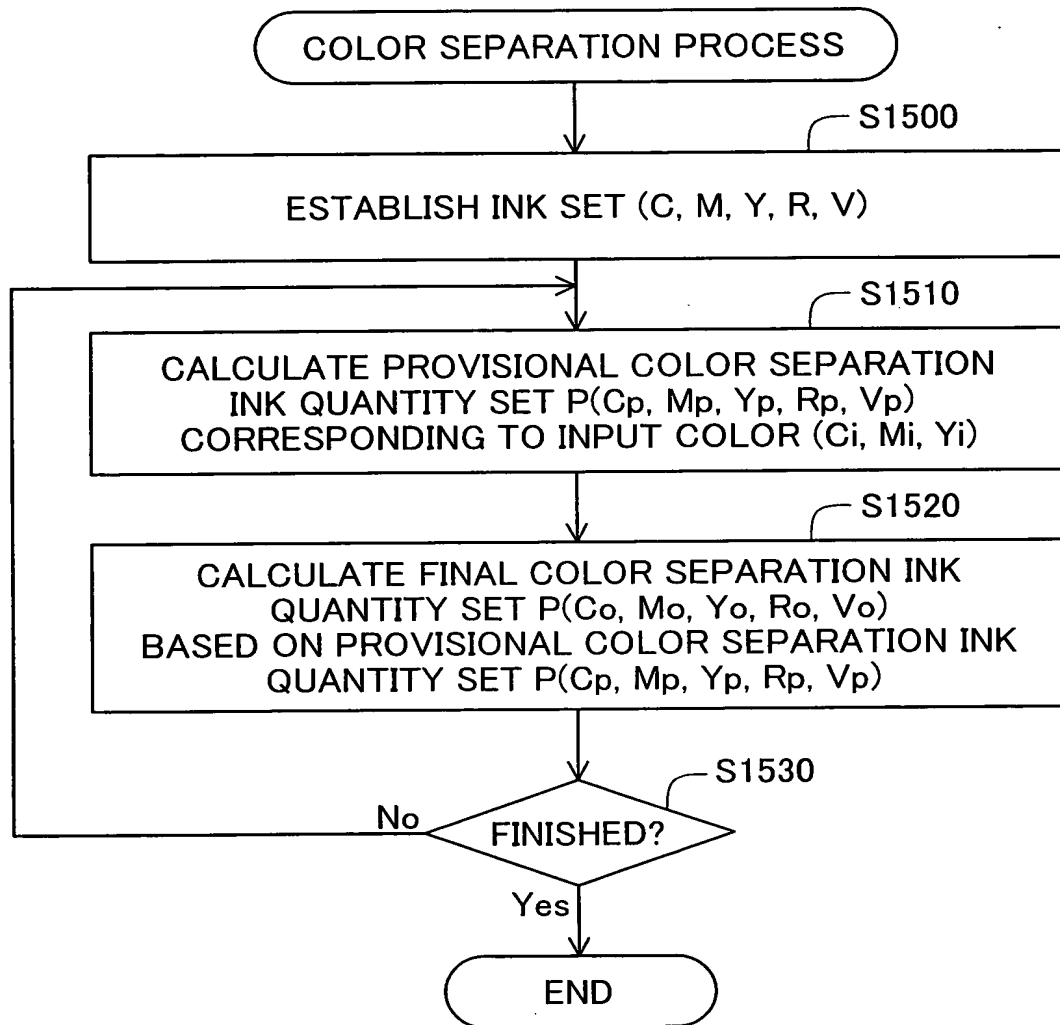


Fig.24

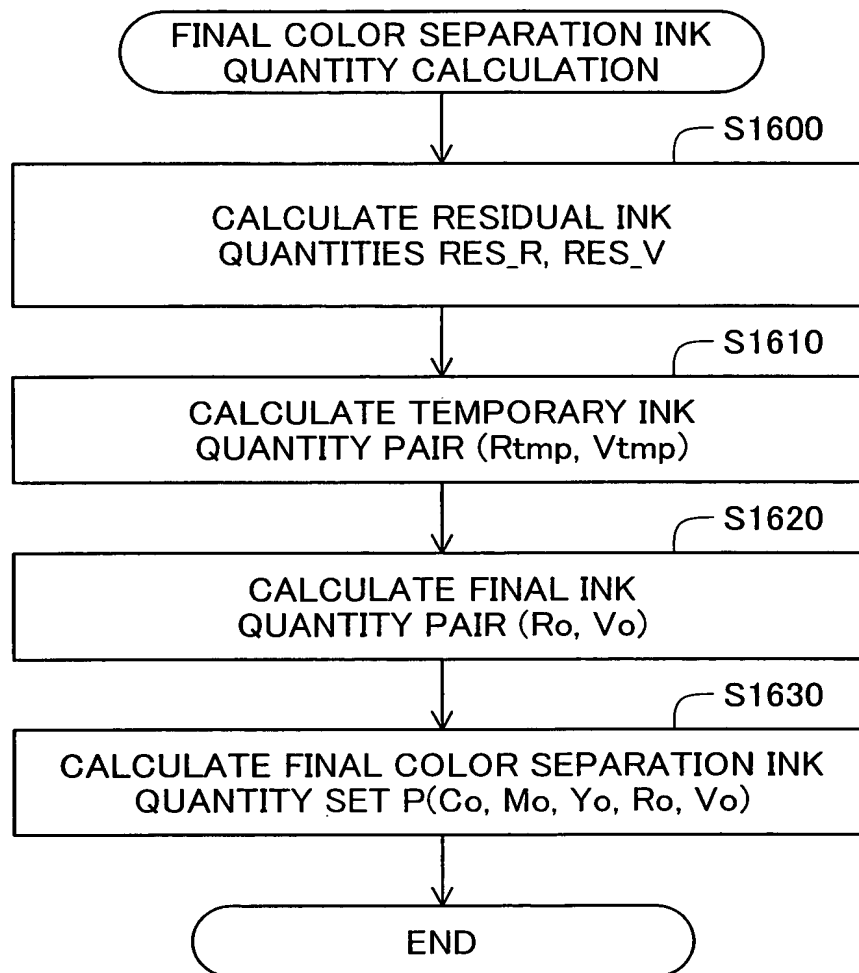


Fig.25(a)

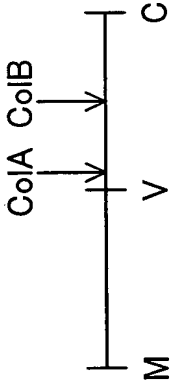


Fig.25(b)

Ink quantities for reproducing color ColA (V ink max.: 100% usage rate)

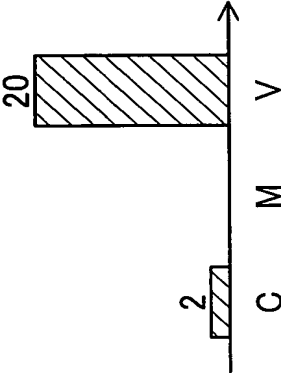


Fig.25(c)

Ink quantities for reproducing color ColA (graininess improvement: 55% usage rate)

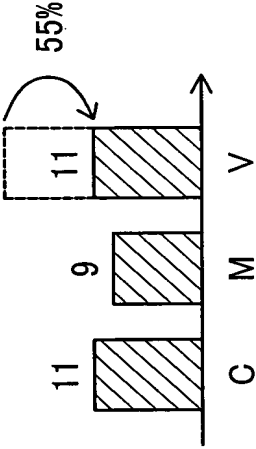


Fig.25(d)

Ink quantities for reproducing color ColB (V ink max.: 100% usage rate)

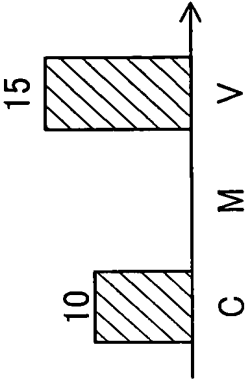


Fig.25(e)

Ink quantities for reproducing color ColB (graininess improvement: 67% usage rate)

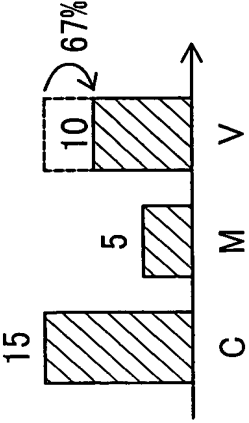


Fig.26(a)

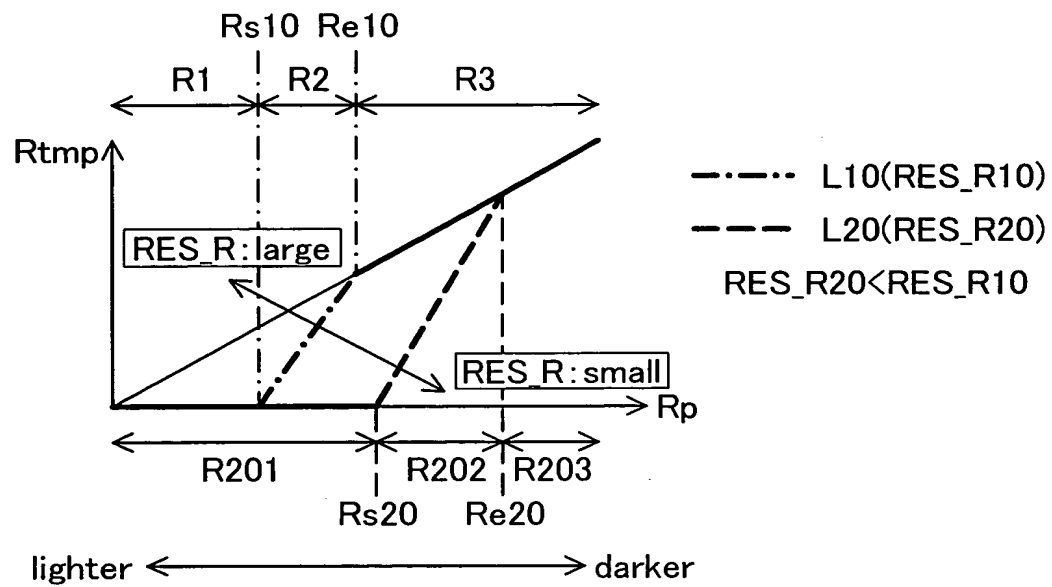


Fig.26(b)

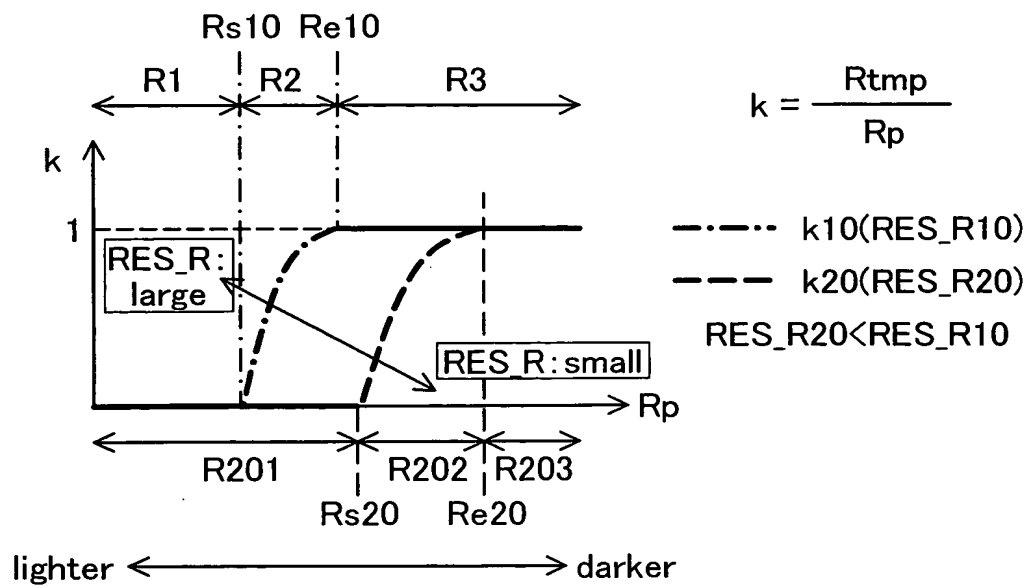


Fig.27

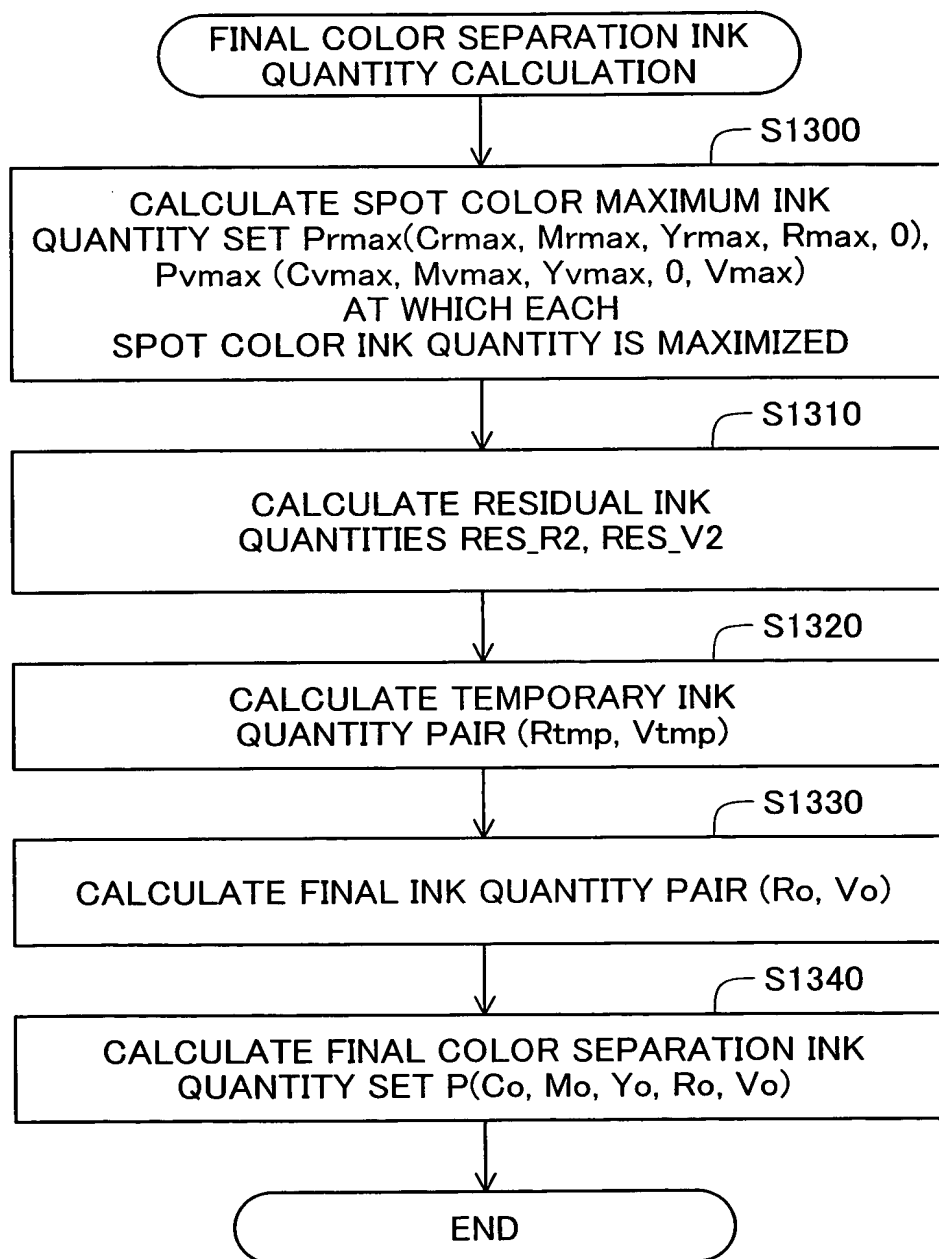


Fig.28(a)

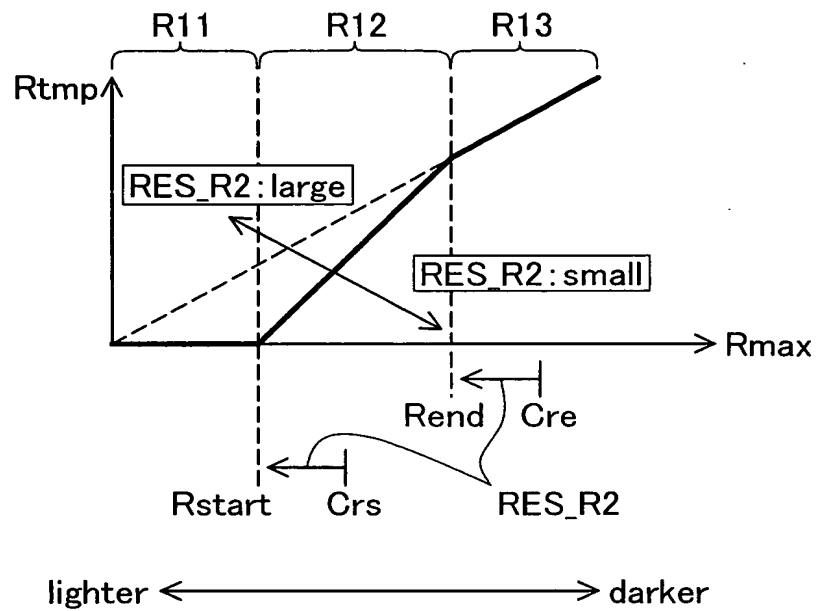


Fig.28(b)

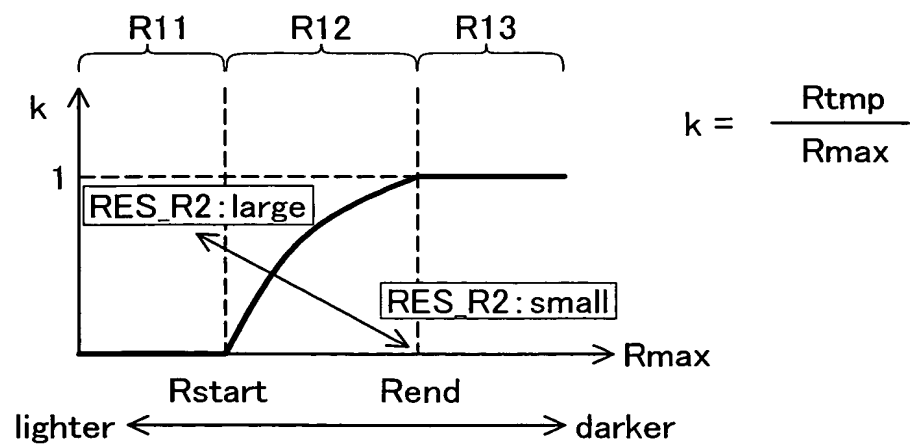


Fig.29

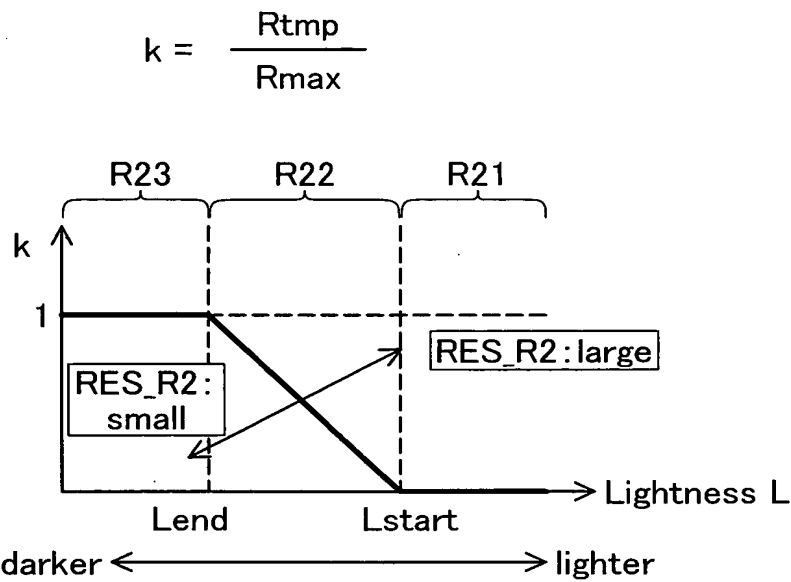


Fig.30(a)

| Ink | | Y | M | C | R | V |
|----------|-------------|-------|-------|--------|-------|------|
| Colorant | Type (C.I.) | PY128 | PR122 | PB15:3 | PR178 | PB60 |
| | Density | 2.0 | 2.0 | 1.5 | 2.0 | 4.0 |

(wt%)

Fig.30(b)

| R | wCR | wMR | wYR | CMY Total |
|-----|-----|------|------|-----------|
| 1.0 | 0.0 | 1.58 | 1.05 | 2.63 |

Fig.30(c)

| V | wCV | wMV | wYV | CMY Total |
|-----|------|------|-----|-----------|
| 1.0 | 1.25 | 0.83 | 0.0 | 2.08 |

Fig.31(a)

| Ink | | Y | M | C | R | V |
|----------|-------------|------|-------|--------|------|------|
| Colorant | Type (C.I.) | PY74 | PR122 | PB15:3 | PO43 | PV23 |
| | Density | 4.0 | 4.0 | 5.0 | 2.0 | 2.0 |

(wt%)

Fig.31(b)

| R | wCR | wMR | wYR | CMY Total |
|-----|-----|------|------|-----------|
| 1.0 | 0.0 | 0.44 | 1.38 | 1.82 |

Fig.31(c)

| V | wCV | wMV | wYV | CMY Total |
|-----|------|------|-----|-----------|
| 1.0 | 1.28 | 4.28 | 0.0 | 5.56 |

Fig.32(a)

| Ink | | Y | M | C | R | V |
|----------|-------------|------|-------|--------|-------|------|
| Colorant | Type (C.I.) | PY74 | PR122 | PB15:3 | PR178 | PB60 |
| | Density | 4.0 | 4.0 | 5.0 | 2.0 | 4.0 |

(wt%)

Fig.32(b)

| R | wCR | wMR | wYR | CMY Total |
|-----|-----|------|------|-----------|
| 1.0 | 0.0 | 1.31 | 0.41 | 1.72 |

Fig.32(c)

| V | wCV | wMV | wYV | CMY Total |
|-----|------|------|-----|-----------|
| 1.0 | 2.20 | 0.30 | 0.0 | 2.50 |

Fig.33(a)

| Ink | | Y | M | C | R | V |
|----------|-------------|-------|-------|--------|------|------|
| Colorant | Type (C.I.) | PY128 | PR122 | PB15:3 | PO43 | PV23 |
| | Density | 4.0 | 3.0 | 2.0 | 2.0 | 2.0 |

(wt%)

Fig.33(b)

| R | wCR | wMR | wYR | CMY Total |
|-----|-----|------|------|-----------|
| 1.0 | 0.0 | 0.81 | 1.89 | 2.70 |

Fig.33(c)

| V | wCV | wMV | wYV | CMY Total |
|-----|------|------|-----|-----------|
| 1.0 | 0.70 | 2.24 | 0.0 | 2.94 |

Fig.34(a)

| Ink | | Y | M | C | R | V |
|----------|-------------|-------|-------|--------|-------|------|
| Colorant | Type (C.I.) | PY128 | PR122 | PB15:3 | PR178 | PB60 |
| | Density | 4.0 | 3.0 | 2.0 | 2.0 | 4.0 |

(wt%)

Fig.34(b)

| R | wCR | wMR | wYR | CMY Total |
|-----|-----|------|------|-----------|
| 1.0 | 0.0 | 1.26 | 0.62 | 1.88 |

Fig.34(c)

| V | wCV | wMV | wYV | CMY Total |
|-----|------|------|-----|-----------|
| 1.0 | 1.33 | 0.70 | 0.0 | 2.03 |

Fig.35(a)

| Ink | | Y | M | C | R | V |
|----------|-------------|-------|-------|--------|-------|------|
| Colorant | Type (C.I.) | PY128 | PR122 | PB15:3 | PR178 | PV23 |
| | Density | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 |

(wt%)

Fig.35(b)

| R | wCR | wMR | wYR | CMY Total |
|-----|-----|------|------|-----------|
| 1.0 | 0.0 | 1.58 | 1.05 | 2.63 |

Fig.35(c)

| V | wCV | wMV | wYV | CMY Total |
|-----|------|------|-----|-----------|
| 1.0 | 0.68 | 2.89 | 0.0 | 3.57 |

Fig.36

| Ink | | Y | M | C | R | V |
|----------|-------------|------|-------|--------|-------|------|
| Colorant | Type (C.I.) | PY74 | PR202 | PB15:3 | PR178 | PV23 |
| | Density | 3.0 | 1.5 | 1.5 | 2.0 | 2.0 |

(wt%)

Fig.37

| Ink | | Y | M | C | R | V |
|----------|-------------|------|------|--------|-------|------|
| Colorant | Type (C.I.) | PY74 | PV19 | PB15:3 | PR177 | PV23 |
| | Density | 3.0 | 2.0 | 1.5 | 2.5 | 2.0 |

(wt%)